

Flux Cored Stainless Steel Electrodes

(Gas Shielded)

Alloy: WW308HT-1

Conforms to Certification: AWS A5.22

Class: E308HTX-X

ASME SFA A5.22

Alloy: E308HT-1

Weld Process: Gas Metal Arc

AWS Chemical Composition Requirements

C = 0.04 – 0.08	Si = 1.0 max
Cr = 18.0 – 21.0	P = 0.04 max
Ni = 9.0 – 11.0	S = 0.03 max
Mo = 0.75 max	Cu = 0.75 max
Mn = 0.50 – 2.5	

Suggested Welding Parameters

Diameter .035	<u>Optimum Parameters</u>			<u>Operating Range</u>	
	Wire Feed Speed	Amps	Volts	Amps	Volts
	Flat	365" / minute	130-140	24-25	100-170 21-26
	Horizontal	365" / minute	130-140	24-25	100-170 21-26
	Vertical-Up	310" / minute	110-120	22-23	110-120 21-23
Overhead	320" / minute	120-130	23-24	120-130 22-24	

Deposited Chemical Composition % (Typical)

C = 0.06	Mn = 1.70	Si = 0.58
Cr = 19.9	Ni = 10.2	P = 0.02
S = 0.02		

Diameter .045	<u>Optimum Parameters</u>			<u>Operating Range</u>	
	Wire Feed Speed	Amps	Volts	Amps	Volts
	Flat	450" / minute	180-200	25-27	135-250 24-32
	Horizontal	450" / minute	180-200	25-27	135-250 24-32
	Vertical-Up	325" / minute	150-170	24-26	135-200 24-26
Overhead	425" / minute	175-195	25-27	155-200 25-28	

Deposited All Weld Metal Properties %

As-Welded

Tensile Strength	86,000psi
Yield Strength	59,000psi
Elongation	35%

Diameter 1/16	<u>Optimum Parameters</u>			<u>Operating Range</u>	
	Wire Feed Speed	Amps	Volts	Amps	Volts
	Flat	264" / minute	220-240	25-27	170-300 24-31
	Horizontal	235" / minute	200-220	25-27	170-270 24-29
	Vertical-Up	220" / minute	190-210	25-26	170-230 24-27
Overhead	235" / minute	200-220	25-26	170-270 24-29	

Deposited Charpy-V-Notch Impact Properties %

Not applicable

For best results, set the wire feed speed and adjust the voltage for smoothest operation. Electrode extension range is from 1/2" to 1," with an optimum range of 5/8" to 3/4." Weld using reverse polarity DC(+).

Application

The composition of this weld metal is the same as that of E308TX-X except for carbon content is in the high end of the range. Carbon provides higher tensile and creep strength at elevated temperatures. This material is used primarily for welding type 308H base metal.

Shielding Gas

75% argon / 25% CO₂ (or nearest equivalent) shielding gas; however, straight CO₂ may also be used. The 75/25 mixture will produce a smoother arc with virtually no spatter and slightly higher yield and tensile strengths than CO₂. The mechanical properties and deposit analyses will meet AWS A5.22 specifications with either gas.

